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RESERVE

1961 ANNUAL REPORT

PLANT  
MATERIALS  
RECORDS

2871

NATIONAL PLANT MATERIALS CENTER

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE



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National Plant Materials Center  
Soil Conservation Service  
Beltsville, Maryland

Introduction

The National Plant Materials Center, one of eighteen plant testing units operated by the Soil Conservation Service of the U. S. Department of Agriculture, occupies approximately 550 acres of the Agricultural Research Center at Beltsville, Maryland.

The Research Center lies at the junction of the Coastal Plain and Piedmont Regions of Maryland, and soils of the area are characterized as a mixture of those common to these regions. The average temperature for January is 34° F., and the average July temperature is 75.8° F. Periodically, winter temperatures drop to 10° to 15° below zero F. Rainfall averages about 42 inches per year with equal distribution during the growing season. Normally, there is a slight drop in monthly precipitation during October, November and December, otherwise rainfall averages between 3 and 4 inches each month. Temperatures during the winter of 1961-62 were close to average, but precipitation was somewhat under normal for the area.

New Accessions

Approximately 600 new accessions were received during the year, contributed by Arboreta, State Experiment Stations, New Crops Research Branch of ARS (both direct and through their Regional Plant Introduction Stations), Forage Crops Section of ARS, and from our SCS plant materials centers and technicians. Included in the material were additional items from Jack Harlan's collections in India, Ethiopia and West Pakistan, and some of the items from the Gentry-Barclay collection in South Africa. Collections were made and distributed of the following major genera: Pennisetum, Panicum, Setaria, Agropyron, Festuca, Helianthus, Lespedeza, Lotus and Trifolium.

Production and Distribution

Collection and propagation of strains of autumn olive (Elaeagnus umbellata) was continued, and distribution to three regions made in the spring of 1962.

Production of black locust continued, and additional shipments of material were made to further the planned test plantings in cooperation with the U.S. Forest Service.

Comparison studies of American beachgrass (Ammophila breviligulata) were continued, as were studies on the establishment of crownvetch (Coronilla varia).

International exchange continued, with 750 items sent to 27 different countries, and conservation materials received from 50 nations.



Domestic distribution increased over the previous year, with more than 1300 seed packets going to the plant materials centers in the five climatic regions. In addition, vegetative material of more than 65 accessions was distributed. This year showed an increase of shipments to the Great Plains and Northeast over previous years.

#### SCS/NAVY Cooperative Ground Cover Study

This project was extended during the year. An artificial embankment was constructed on the National Plant Materials Center, and seeding mixtures and spaced plantings of selected ground covers were made in April and July. Several of the seeded mixtures appear very promising. Additional areas were placed under test with selected ground cover materials at various Naval Stations, which will extend studies over a wider range of soils and climatic conditions.

#### "Tuffy" bermudagrass

The foundation block for the "Tuffy" selection of bermudagrass, which has performed exceedingly well on playing fields and areas of heavy traffic, is being maintained at the National Plant Materials Center. The selection will be released jointly by the Soil Conservation Service, the University of Maryland, and the Agricultural Research Service in early September of 1962.

#### Visitors

The Center was host to many visitors during the year who came from all parts of the United States, and from twenty or more foreign nations, individually or in groups on the regularly scheduled tours of the Agricultural Research Center.



NOTES AND COMMENT

Aeluropus littoralis (Willd.) Parl.

Central Asia to the Mediterranean region. Spreads widely by stolons and powerful rhizomes. Ours died of disease. Original seed was sent to the Southeast and Northeast areas.

Agropyron intermedium (Host.) Beauv.

This long-lived, rhizomatous, turf-forming grass is a native of central and south Europe, extending eastward to central Asia. It's adapted to a temperate, dry climate with not less than fifteen inches of rainfall, and well drained soils.

Agropyron obtusiusculum Lange

Although a native of Denmark and Scandinavia, we secured this accession through the Spanish Experiment Station. It carries its leaves to two feet in height, but the amount of foliage wasn't too great.

Agropyron patagonicum (Speg.) Parodi, and A. remotiflorum Parodi.

These came from the inland sand dunes of Santa Cruz, Argentina, in association with Stipas. Original seed went to Los Lunas PMC.

Agropyron pungens (Pers.) Roem & Schult.

Native to the temperate regions of both hemispheres. A perennial, creeping, with stout runners, stems to one foot. Leaves compact, often bristly. Found in sandy places along the seacoast of Southern Europe. For us it was a small, rhizomatous sod former, and a little like quackgrass. Original seed went to the Great Plains area.

Agropyron subulatum Roem. & Schult.

We didn't get the five-foot spread that they obtained at the Plant Introduction Station in Pullman. Leaf disease was severe in our climate. Original seed went to Big Flats PMC.

Agropyron trichophorum (Link.) Richt.  $2n = 42$

This tufted perennial which develops short, thick rhizomes in two to three years, is native to eastern Europe and central and southwest Asia. It is drought resistant and adapted to alkaline soil and hot dry areas. Pasture and range reseeding in the intermountain areas of our far west. Part of the original seed was sent to the Great Plains area.

Agrostis alba stolonifera Sm.  $2n = 28$

From the marshlands of Husum, Germany. Couldn't take the heat and dryness of our location. Original seed also went to Big Flats PMC.

Agrostis canina L.  $2n = 14$

Velvet bent likes the cool continental climate, and is usually found in low-lying damp situations. Ours is renewal of 1950 seed.



NOTES AND COMMENT

Alopecurus arundinaceus Poir.

From the temperate parts of Europe and Asia, it forms a valuable component in Alpine pastures up to 10,000 feet. Original seed shared with Great Plains and Northeast.

Alopecurus myosuroides Huds. (In 1960 report) 2 n = 14

From Iran. Forms part of the available fodder in alpine pastures, but can become a serious pest in wheat and rye fields. Ours volunteered readily, so we have second seed crop this year.

Alopecurus pratensis L. 2 n = 28

Long-lived perennial, producing an open turf, which is native to northern Europe and northern Asia. Best adapted to cool, moist, temperate climates. Does well in the shade of orchards. No distribution.

Of the Alopecurus pratensis accessions, it had to happen that a single seedling from PI-266407 lived and looks best. It needs a mate to set seed.

Apluda mutica L. 2 n = 20, 40

A common grass all over India on the plains and in the hills, extending into southeast Asia and Australia. Found in forests and open country. Good fodder when young, but rapidly becomes unpalatable. No distribution.

Aristida adscensionis L. 2 n = 22

Widely distributed in the old and new worlds. Came to us as Aristida sp. from West Pakistan. Naturalized throughout the southwestern U.S.A. No distribution.

Arrhenatherum kotschy Boiss

Out of Iran. This annual with bulbous culms matured rapidly in early spring with a poor seed set. No distribution.

Arundinella hirta (Thunb.) Koidz.

A Japanese-Chinese species adapted to moderately damp situations in fairly poor soil. Occurs in mixed meadows. Palatable to stock when young. Some original seed sent to Florida, New Mexico and Georgia PMC's.

Arundinella nepalensis Trin.

Perennial. A variable species. Was not as leafy or vigorous with us. Found in wet soils. Similar to reed canarygrass. No distribution.

Astrebla lappacea (Lindl.) Domin.

Coarser than mitchellgrass, but possesses the well known fattening and drought resistant qualities. It comes from central dry Australia. No distribution.

Avena barbata Brot. 2 n = 28

A quick-maturing annual, with no recognized conservation value for SCS. No distribution.



NOTES AND COMMENT

Brachypodium phoenicoides (L.) Roem. & Schult.

Most Brachypodiums are found on shallow rocky hillsides, where they provide the only cover in some instances. Part of the original seed was sent to California. The same holds for B. pinnatum (L.) Beauv.  $2n = 28$ . These are not forage crops.

Bromus japonicus Thunb.

The three accessions collected in Iran and West Pakistan by Jack Harlan showed no superiority as winter cover crops, varying in total height from fourteen inches to twenty inches. No distribution.

Bromus macranthos Desv.

Another Argentine perennial from Santa Cruz failed in our climate. Some of the original seed went to Los Lunas PMC.

Bromus macrostachys Desf.

Another winter annual. PI-268223 was shy in leaves. No distribution.

Bromus marginatus Nees

This short-lived perennial native to our Pacific northwest is quick to establish, with a good root system. PI-241047 from Oregon looked good here in spite of some leaf disease. No distribution.

Bromus tomentellus Boiss.

From Iran. Is a tufted perennial in mountain pastures. Prefers alkaline soils. Found in areas with four months of snow to areas with no rain during May to October. No distribution.

Calyptochloa gracillima C.E.Hubb.

This stoloniferous perennial comes from the central dry region of Australia. Appears more like a lawn grass but is very weak. No distribution.

Cenchrus setigerus Vahl.  $2n = 34$

Accessions from India came mostly from the low rainfall areas. It is said to prefer sandy soils and is regarded as one of the most nutritious Indian pasture species. No distribution.

Chrysopogon montanus Trin. ex Spreng. (C. fulvus (Spreng) Chiov.)

An esteemed fodder grass in the tropics of Asia and East Africa. Highly variable. None of the accessions performed well here, although some are winter hardy. No distribution.

Dactylis glomerata v. hispanica Diploids  $n = 10$ , and Octoploids  $n = 40$ . With this one from Tunisia we hardly got our seed back from the tiny 3"x3" tufts which died in winter. No distribution.

Dactyloctenium aegyptium (L.) Beauv.  $2n = 20, 36, 48$

From tropical regions of the old world, and introduced into American, this grass is said to be high in cyanogenetic glucosides and dangerous to stock at certain times. PI-271561 from India produced a great volume of material. No distribution.



NOTES AND COMMENT

Echinochloa crusgalli (L.) Beauv.  $2n = 42, 48, 54$

This species exists in a number of races found in a variety of habitats. A troublesome weed in temperate countries, its seeds are relished by birds, and by the peasants of India in times of want. No distribution.

Eleusine coracana (L.) Gaertn.  $4n = 36$

Finger millet. This annual is grown as a cereal in the tropics, as well as for use as a fodder catch crop. Resembles E. indica, but is more robust. No distribution.

Elymus dahuricus Turcz.  $2n = 28, 42$

Not much information on this Asiatic species found from West Pakistan to Mongolia, apparently in the higher altitude inter-mountain valleys. No distribution.

Elymus erianthus R.A.Phil, and Elymus patagonicus Speg.

Also from Santa Cruz, Argentina - went out like a doused light with us - no bloom, no seed. Some of the original seed went to Los Lunas PMC.

Eragrostis megalosperma F. Muell.

Ours appeared to be a warm tender perennial bunchgrass that was stopped by the first frost and failed to survive the winter. No distribution.

Eragrostis papposa (Desf.) Steud.

From the Mediterranean region into northwest India. It came to us as E. species. A most attractive species with branchlets tinged with purple and leaves glaucous, forming a delightful color scheme in bright sunlight - what else? No distribution.

Eragrostis pilosa (L.) Beauv.  $2n = 40$

This annual has a wide distribution in the tropical and warmer regions of the old world. Looks like it could become an annual weed. No distribution.

Festuca elatior L. (Festuca pratensis Huds.)  $2n = 14$

Adapted to cool moist temperate climate and rich soils, also sandy soils, if moist. Resistant to cold but not drought. Our climate is conducive to high incidence of disease. BN-10508 was sent to Big Flats PMC.

Festuca spectabilis Jan. (The botanists now want to call this F. arundinacea.)

Strong growing and hardy perennial with abundant leaves; overall height exceeds four feet, but foliage is a little harsh. Original seed went to Idaho.

Heteranthelium piliferum (Russ.) Jaub. & Spach.

Ours came out of Iran as an unknown species and turned out to be a worthless annual with wide distribution through Tashkent, Iraq and Afghanistan. No distribution.



NOTES AND COMMENT

Hordeum comosum Presl.

These accessions from the inland dunes of Argentina all died within three months following field planting. Original seed was sent to Los Lunas PMC.

Hyparrhenia hirta (L.) Stapf.  $2n = 30, 40, 44, 50$

A tussock-forming perennial adapted to a wide range of soils, and extremely drought resistant. Good grazing only when young. Wide distribution in Mediterranean region, Middle East to South Africa. Ours went from four to twelve feet tall. Our reproduction of BN-11234 went to Florida.

Hyparrhenia lintoni Stapf.

Out of Kenya Agricultural Experiment Station. Is an extremely fine-stemmed, leafy, forage-type plant. Made rapid recovery after cutting. Shattering florets is the problem. Original seed was sent to Arcadia PMC.

Lolium perenne L.  $2n = 14$

These accessions from the Netherlands represent three types - early hay, late hay, and pasture. Moderate leaf disease in our climate. Original seed went to Big Flats and Pullman PMC's.

Lolium perenne L.

The variety "Viris", produced in Sweden, was pretty weak here; perhaps it did better at the Pullman PMC which got part of the original seed.

Lolium persicum Boiss., Hohen.

Found from Afghanistan to Iraq and Persia, this annual is said to be common in meadowland near water. No distribution.

Lolium rigidum Gaud.

Erect, tufted winter-growing annual from which comes the Australian "Wimmera" ryegrass. Ours is lacking in leaves. Does well between twelve to twenty-five inches of rainfall. No distribution.

Melica ciliata L.

Sparse, open, weak and useless for conservation. Occasionally grown in Europe as an ornamental. No distribution.

Ophiurus exaltatus (L.) Kuntze.

A coarse perennial with flat blades, culms erect. Found in open forests and savannahs. Racemes solitary, spike-like and segmented. Part of the original seed was sent to Arcadia PMC.

Panicum ambiguum Trin. (Brachiaria paspaloides (Presl.) C.E.Hubb.)  $2n = 36$

This annual, although producing an abundance of leaves and tacking at the nodes, looked a little weedy, shattering its seed but still retaining a green color. Original seed also went to Arcadia and Hawaii PMC's.



NOTES AND COMMENT

Panicum antidotale Retz. 2 n = 18

India, Arabia to Australia, summer rainfall climate. Resistant to drought and easily damaged by frost. Suitable to light sandy soils, rapidly producing large quantity of palatable but coarse herbage. Went to Great Plains (Texas), Southeast, and Hawaii.

Panicum coloratum L.

This highly variable group wants an area where moderate rainfall is thirty to fifty inches; likes heavy soils; has some drought tolerance. Is not frost-resistant. Grows in wet and often waterlogged soils. As a fodder and soil binder it has distinct possibilities. Seed of most of these accessions was sent to Texas and the Southeast, also to Hawaii.

Panicum miliaceum L. 2 n = 36, 72

Our two accessions of proso millet were not outstanding, but were relished by birds. No distribution.

Panicum stapfianum Fourc.

From the Union of South Africa. Found in areas of impeded drainage, in association with Eragrostis bicolor and Eragrostis lehmanniana, representing the same arid range of ten to twelve inches of rainfall. Has straight stems and is a tufted plant, whereas P. coloratum is not tufted and culms are not straight. Most of these went to Texas, Arcadia and Hawaii.

Panicum virgatum L.

The two accessions from Clifton Springs, N.Y. are very similar in appearance, while the two cubense varieties from Scotland County, North Carolina are so alike that seed of BN-10996 and BN-10997 are being dumped together. No distribution.

Pennisetum ciliare (L.) Link. 2 n = 32, 34, 36, 40, 54

The accessions reported this time represent a collection from the Grasslands Research Station of Southern Rhodesia, with the balance from India. The collection contains both blue and green buffelgrass. Like the birdwood grass, Cenchrus setigerus, some of these came from low rainfall areas. We haven't had one survive over winter yet. These are apomictic to a certain point, not one hundred percent. No distribution of recent accessions.

Pennisetum macrourum Trin. l.c.

Self-fertile contaminant out of Bud Smith's buffelgrass T-4701, was once a native of South Africa. Although the plant isn't so tall, you will find stems and leaves suggest a good forage. No distribution.



NOTES AND COMMENT

Pennisetum orientale L. Rich 2 n = 36

This species possesses powerful woody rootstalks, spreading by short, thick rhizomes. Should be useful as a soil binder and probably as fodder. It has been reported that this species is a facultative apomict. No distribution.

Phalaris aquatica L. (Was P. tuberosa L.) 2 n = 28

This tufted perennial with culms usually swollen at base is adapted to the subtropical winter-rainfall climate, and withstands long summer droughts. Grown extensively in Australia and India in areas with 17+ inches of rainfall. Very persistent, with forty-year-old stands still good. The "staggers" disease sometimes associated with this grass is no more than a cobalt-deficient diet, and is corrected by feeding cobalt salt or treating the land. We have some winter hardy accessions. No distribution.

Phleum pratense L.

The varieties, "Kempe II" and "T-41", from Weibull's Seed Company, Sweden, looked pretty good here. Pullman PMC also tested part of the original seed.

Pletrachne bynoei C. E. Hubb.

From tropical western Australia - turned out to be of little value, having harsh, sticky leaves. Was discarded. No distribution.

Poa ligularis (Nees.) Steud.

Not one of the Santa Cruz, Argentina, sand binders did well here, including this species. Original seed went to Los Lunas.

Poa palustris L.

The ecotype from North Dakota looked pretty sad here. We should perhaps pick up some eastern ecotypes out of New Jersey or Virginia. No distribution.

Polypogon monspeliensis (L.) Desf. 2 n = 28

Ours came to us from Afghanistan as 'species unknown'. It is a widespread annual in Europe and temperate parts of Asia. A common weed in western states of the United States, in moist places it can become very lush and afford rich feeding for grazing animals. No distribution.

Puccinellia maritima Parl.

This in conjunction with Festuca rubra littoralis makes some of the finest pastures in the Dutch lowlands. Ours came from the Marshland Research Station, Germany. Plants have gone to South Carolina and Louisiana; seed to Southeast.

Seslaria sp.

Ours came from the Yugoslavian mountains, elevation 5000 feet. Is indicated as a xerophyte. If it turns out to be S. coerulea (L.) Ard. it is a wiry perennial with short creeping rootstalks, abundant in the calcareous hills and pastures of Northern Europe. No distribution.



NOTES AND COMMENT

Setaria palmifolia (Koen.) Stapf.

Sometimes called Panicum plicatum. This tall perennial is cultivated in the south or in greenhouses as an ornamental grass. It is a native of India. No distribution.

Setaria sphacelata (Schum.) Stapf. & Hubb. 2 n = 36, 54

An African species extending from the Union of South Africa to Kenya in the east and Senegal in the west. This perennial is with or without rhizomes or stolons. Selected strains are being developed, and it is becoming increasingly popular for silage, hay and grazing. Seeding rate is 4 to 10 lbs per acre in the 25 to 50 inch rainfall zone, with summer rains. No distribution.

Stipa spp.

As to the Stipas from Argentina - all died in less than three months. Original seed also went to Los Lunas.

Trichloris crinita (Lag.) Parodi.

This one came to us as Chloris sp. from Argentina via D. S. Correll, Renner, Texas, and turned out to be the one found in arid and semi-arid areas of western Texas, Arizona and northern Mexico. Reputedly of little forage value.

Zoysia matrella (L.) Merr.

Common on seashores. Was received from Taiwan as vegetative material. It is a good-looking, fine-leaved lawn grass but not as aggressive as straight Z. japonica. Sent to Coffeeville, Miss., PMC.



CHANGES IN NOMENCLATURE

| From  | To  | Authority    |
|---|---|--------------|
| <i>Andropogon annulatus</i> Forsk.                              | <i>Dicanthium annulatum</i> (Forsk.) Stapf.                       | RI No. 35    |
| <i>Andropogon ischaemum</i> L.                                  | <i>Bothriochloa ischaemum</i> (L.) Keng.                          | RI No. 27    |
| <i>Andropogon nodosus</i> (Willm.)                              | <i>Dicanthium aristatum</i> (Poir.) C. E. Hubb.                   | RI No. 55    |
| <i>Bromus catharticus</i> Vahl.                                 | <i>Bromus willdenowii</i> Kunth                                   | RI No. 52    |
| <i>Leucaena glauca</i> (L.) Benth.                              | <i>Leucaena leucocephala</i> (Lam.) de Wit                        | RI No. 51    |
| <i>Lotus uliginosus</i> Schkuhr                                 | <i>Lotus pedunculatus</i> Cav.                                    | RI No. 37    |
| <i>Medicago hispida</i> Gaertn.                                 | <i>Medicago polymorpha</i> var. <i>vulgaris</i> (Benth.) Shinners | RI No. 37    |
| <i>Phalaris tuberosa</i> L.                                     | <i>Phalaris aquatica</i> L.                                       | RI No. 54    |
| <i>Phalaris tuberosa</i> v. <i>stenoptera</i><br>(hardinggrass) | <i>Phalaris aquatica</i> X P. <i>arundinacea</i>                  | Terrell, ARS |
| <i>Setaria lutescens</i> Weigel                                 | <i>Setaria glauca</i> (L.) Beauv.                                 | Terrell, ARS |



1961 Grass Plantings - Beltsville, Md.

| BN NO.   | SPECIES               | PI NO. | ORIGIN  | HABIT | STEMS    | LEAVES | POLLIN.   | BLOOM    | MATURE<br>SIZE | SEED<br>COLL.  | SEED     |
|----------|-----------------------|--------|---------|-------|----------|--------|-----------|----------|----------------|----------------|----------|
|          | AEGILOPS              |        |         |       |          |        |           |          |                |                |          |
| 11429-60 | triuncialis           | 268207 | Iran    | C A   | F E      | F B    | Poor acc. | June     | 12-2x6         | July           | 13 grms. |
| 11428-60 | sp.                   | 268206 | Iran    | C A   | F E      | F B    | Useless   | June     | 12-2x5         | July           | 13 grms. |
| 11431-60 | sp.                   | 268209 | Iran    | C A   | F E      | F B    |           | Aug.     | 8-2x2          | Sept.          | Trace    |
| 11432-60 | sp.                   | 268210 | Iran    | C A   | F E      | F B    | Weedy     | July     | 14-5x4         | Aug.           | 4 grms.  |
|          | AELUROFUS             |        |         |       |          |        |           |          |                |                |          |
| 11216-59 | littoralis            | 264358 | USSR    | H P   | *MA S 1/ | MA C   |           |          | --6x12         | Severe disease |          |
|          | AGROPYRON             |        |         |       |          |        |           |          |                |                |          |
| 11218-59 | patagonicum           | 264398 | Argent. |       |          |        | All dead  | 9/26/61  |                |                |          |
| 11219-59 | remotiflorum          | 264399 | Argent. |       |          |        | All dead  | 9/26/61  |                |                |          |
|          | AGROSTIS              |        |         |       |          |        |           |          |                |                |          |
| 11510-60 | alba v. stolon-269838 |        | Ger.    |       |          |        | All dead  | 7/31/61  |                |                |          |
|          | ALOPECURUS            |        |         |       |          |        |           |          |                |                |          |
| 11114-60 | pratensis             | 266470 | Nether. | C H P | F E      | MA B   | C 1 cl.   | June     | 26-18x11       | July           | Trace    |
| 11211-60 | pratensis             | 267697 | Nether. | C H P | MA E     | MA B   | 1 cl.     | 40-12x10 | Aug.           |                | 3 grms.  |
|          | APLUDA                |        |         |       |          |        |           |          |                |                |          |
| 11653-60 | mutica                | 271556 | India   | C H P | F S      | F BC   | C         | July     | 10-10x4        | No seed        |          |
|          | ARISTIDA              |        |         |       |          |        |           |          |                |                |          |
| 11514-60 | adscensionis          | 269867 | W.Pak.  | A     | *A S     | F C    | ?         | June     | 24-12x18       | July-Sept.     | 14 grms. |
|          | ARRHENATHERUM         |        |         |       |          |        |           |          |                |                |          |
| 11433-60 | kotschyi              | 268211 | Iran    | A     | F E      | MA B   |           | June     | 18-5x9         | June*          | Trace    |

1/ - Rhizomatous



1961 Grass Plantings - Beltsville, Md.

| BN NO.          | SPECIES                 | PI NO.    | ORIGIN  | HABIT            | STEMS   | LEAVES | POLLIN. | BLOOM    | MATURE<br>SIZE | SEED<br>COLL. | SEED     |
|-----------------|-------------------------|-----------|---------|------------------|---------|--------|---------|----------|----------------|---------------|----------|
| 10969-59        | ARUNDINELLA hirta       | 263693    | Korea   | W T P            | MA E    | FC     | ?       | Aug.     | 40-24x14       | Oct.          | 92 grms. |
| 10438-58        | nepalensis              | 257669    | Austral | W T P            | FE      | FC     | ?       | July     | 42-32x9        | Sept.-Oct.    | 2 grms.  |
| 11708-56        | ASTREBLIA lappacea      | ex 238232 | Austral | C T P            | A E     | MA C   | S       | Apr-May  | 36-18x20       | May-June*     | -1 grm   |
| 11435-60        | AVENA barbata           | 268213    | Iran    | A                | MA E    | MA BC  | S       | Mar.     | 48-23x10       | May*          | 26 grms  |
| 11436-60        | barbata                 | 268214    | Iran    | A                | MA E    | MA BC  | S       | Apr.     | 48-23x10       | May*          | 73 grms  |
| 11440-60        | BROMUS japonicus        | 268220    | Iran    | C A              | FE      | AB     | S       | June     | 17-6x10        | July-Aug.     | 2 grms.  |
| 11441-60        | japonicus               | 268221    | Iran    | C A              | FE      | AB     | S       | June     | 14-5x10        | July-Aug.     | 4 grms   |
| 11515-60        | japonicus               | 269876    | W.Pak.  | C A              | MA E    | MA B   | S       | June     | 20-9x10        | July          | 159 grms |
| **11221-59      | macranthos              | 264401    | Argent. | ALL dead by 8/31 |         |        |         |          |                |               |          |
| 8939-59         | marginalis              | 241047    | Ore.    | C H P            | FE      | FB     | C       | May      | 34-10x7        | June          | 3 oz     |
| 11437-60        | tomentellus             | 268217    | Iran    | C H P            | FE      | FB     | ?       | ?        | 28-8x6         | June (rust)   | 4 seed   |
| CENCHRUS        | setigerus               | 271144    | India   | W T P            | MA S 1/ | MA D   | ?       | June-Aug | 28-28x30       | Aug.-Oct.     | 420 grms |
|                 | setigerus               | 271145    | India   | W T P            | MA S 1/ | MA BC  | ?       | July-Aug | 22-18x28       | Aug.-Oct.     | 182 grms |
| 11580-60        | setigerus               | 271528    | Iran    | W T P            | MA S    | AD     |         | July     | 26-20x22       | Aug.          | 450 grms |
| 11643-60        | setigerus               | 271529    | Iran    | W T P            | AP      | AD     |         | June     | 10-8x34        | Aug.-Oct.     | 360 grms |
| 11584-60        | CHRYSSOPOGON montanus   | 271149    | India   | C T P            | AS      | AB     | C       | Sept.    | ---16x37       | No seed       |          |
| 1/- Rhizomatous | **11443-60 macrostachys | 268223    | Iran    | CA               | MA E    | FB-C   |         | May-June | 10-6x26        | July          | 42 grms  |



1961 Grass Plantings - Beltsville, Md.



1961 Grass Plantings - Beltsville, Md.

| BN NO.   | SPECIES                  | PI NO. | ORIGIN    | HABIT | STEMS | LEAVES | POLLIN.   | BLOOM | MATURE | SEED SIZE | COLL. | SEED |
|----------|--------------------------|--------|-----------|-------|-------|--------|-----------|-------|--------|-----------|-------|------|
| 11224-59 | <i>Hordeum comosum</i>   | 264404 | Argent.   |       |       |        |           |       |        |           |       |      |
| 11225-59 | <i>comosum</i>           | 264405 | Argent.   |       |       |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
| 11234-59 | <i>Hyparrhenia hirta</i> | 264544 | E.Afr.    | W T P | A E   | A D    | MA B C    |       |        |           |       |      |
| 11418-60 | <i>hirta</i>             | 269851 | Tunis.    | W T P | MA E  | MA B C |           |       |        |           |       |      |
| 11450-60 | <i>hirta</i>             | 268261 | Iran      | W T P | A E   | MA B C |           |       |        |           |       |      |
| 11235-59 | <i>lintonii</i>          | 264545 | E.Afr.    | W T P | A S   | A D    | C         |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
| 11277-60 | <i>Lolium perenne</i>    | 266291 | Nether.   | C H P | A E   | A B    |           |       |        |           |       |      |
| 11278-60 | <i>perenne</i>           | 266292 | Nether.   | C H P | MA E  | A B    |           |       |        |           |       |      |
| 11279-60 | <i>perenne</i>           | 266293 | Nether.   | C H P | MA E  | A B    |           |       |        |           |       |      |
| 11502-60 | <i>persicum</i>          | 269386 | Afghan A  | MA S  | MA D  | S-?    |           |       |        |           |       |      |
| 11501-60 | <i>rigidum</i>           | 269385 | Afghan A  | MA P  | F C   |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
| 11452-60 | <i>Melica ciliata</i>    | 268266 | Iran      | C P   | F E   | F C    | Useless   |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
|          |                          |        |           |       |       |        |           |       |        |           |       |      |
| 11555    | <i>Panicum ambiguum</i>  | 271024 | Austral A |       | A S   | A C    |           |       |        |           |       |      |
| 11667    | <i>antidotale</i>        | 271590 | India     | W H P | MA E  | MA C   |           |       |        |           |       |      |
| 5225-56  | <i>coloratum</i>         | 166400 | S.Afr.    | W T P | MA E  | MA B C |           |       |        |           |       |      |
| 6513-57  | <i>coloratum</i>         | 185546 | S.Afr.    | W T P | MA E  | MA B C |           |       |        |           |       |      |
| 6515-57  | <i>coloratum</i>         | 185549 | S.Afr.    | W T P | F S   | F D    |           |       |        |           |       |      |
| 6518-57  | <i>coloratum</i>         | 185551 | S.Afr.    | W T P | F S   | F C    |           |       |        |           |       |      |
| 6519-57  | <i>coloratum</i>         | 185558 | S.Afr.    | W T P | F S   | F C    | poor acc. |       |        |           |       |      |
| 6735-57  | <i>coloratum</i>         | 188931 | S.Afr.    | W T P | F S   | F C    |           |       |        |           |       |      |
| 6736-57  | <i>coloratum</i>         | 188932 | S.Afr.    | W T P | F S   | F C    |           |       |        |           |       |      |
| 7268-57  | <i>coloratum</i>         | 196360 | S.Afr.    | W T P | MA S  | MA C   |           |       |        |           |       |      |

Am.

\*Stolon.  
A-Abund.  
MA-Mod."  
F-Few  
E-Erect  
S-Sub-"  
C-Caul.  
D-Distr.  
A-Apom.

Hd. Ht.

X house

-Sprd.

Period

Date

Nov.-Jan

May-Aug

June-Aug

Nov.

144-120x48 Jan.\* 4 grms  
60-36x18 Jun-Aug.\* -1 grm  
48-40x42 Sept.-Oct.\* 60 grms  
42-38x48 Jan.\* - Trace

21-8x14 July 54 grms  
26-7x15 Aug. 54 grms  
26-7x20 Aug. 60 grms  
3-3x40 May\* 60 grms  
3-3x36 May\* 20 grms

18-12x6 June 1 grm  
May-June 8-5x15 23 grms  
July-Aug 60-42x36 5½ oz.  
June-Aug 40-34x48 38 grms  
June-July 54-40x28 23 grms  
June 40-30x28 23 grms  
June-Aug 40-28x20 10 grms  
June-Aug 36-20x26 Aug-Sept 6 grms  
July 40-25x24 Aug-Sept 3 grms  
June-Aug 48-24x24 Aug-Sept 4 grms  
June-Aug 40-26x34 Aug-Sept 2 grms



1961 Grass Plantings - Beltsville, Md.

| BN NO.   | SPECIES        | PI NO. | ORIGIN  | HABIT    | STEMS          | LEAVES           | POLLIN.          | BLOOM            | MATURE<br>SIZE | SEED<br>COLL. | SEED | SEED<br>COLL.. |
|----------|----------------|--------|---------|----------|----------------|------------------|------------------|------------------|----------------|---------------|------|----------------|
| C-Cool   | *Stolon.       |        |         | A-Abund. |                |                  |                  |                  |                |               |      |                |
| W-Warm   | A-Abund.       |        |         | A-Abund. |                |                  |                  |                  |                |               |      |                |
| H-Hardy  | MA-Mod."       |        |         | MA-Mod." |                |                  |                  |                  |                |               |      |                |
| T-Tender | F-Few          |        |         | F-Few    |                |                  |                  |                  |                |               |      |                |
| P-Peren. | E-Erect        |        |         | B-Basal  | S-Self         | Hd. X            |                  |                  |                |               |      |                |
| A-Annual | S-Sub-         | "      |         | C-Caul.  | C-Cross        | X                |                  |                  |                |               |      |                |
| B-Bienn. | P-Pros.        |        |         | D-Distr. | A-Apom.        | Date             | Ht.-Sprd.        | Period           | Ant.           |               |      |                |
| PANICUM  |                |        |         |          |                |                  |                  |                  |                |               |      |                |
| 7272-57  | coloratum      | 196364 | S.Afr.  | W T P    | MA E           | June-Aug         | 38-15x12         | Aug-Sept         | 4 grms         |               |      |                |
| 7273-57  | coloratum      | 196365 | S.Afr.  | W T P    | MA S           | June-Aug         | 46-30x26         | Aug-Oct.         | 11 grms        |               |      |                |
| 8245-56  | coloratum      | 206370 | S.Afr.  | W T P    | A E            | June-Aug         | 70-58x60         | Aug-Oct.         | 10 grms        |               |      |                |
| 9799-58  | coloratum      | 253240 | S.Afr.  | W T P    | A E            | A C              | Tacking at nodes | 68-57x44         | 9 grms         |               |      |                |
| 9800-57  | coloratum      | 253241 | S.Afr.  | W T P    | MA E           | July-Aug         | 72-56x38         | Aug-Sept         | 20 grms        |               |      |                |
| 9801-58  | coloratum      | 253242 | S.Afr.  | W T P    | MA E           | MA D             | July-Sept        | 72-58x40         | 26 grms        |               |      |                |
| 9802-58  | coloratum      | 253243 | S.Afr.  | W T P    | A E            | MA D             | July-Aug         | 54-36x36         | 74 grms        |               |      |                |
| 9805-58  | coloratum      | 253246 | S.Afr.  | W T P    | MA S           | F D              | July             | 40-35x54         | 2 grms         |               |      |                |
| 9806-58  | coloratum      | 253247 | S.Afr.  | W T P    | MA S           | MA D             | June-Aug         | 55-36x30         | Aug-Sept       | -1 grm        |      |                |
| 9808-58  | coloratum      | 253249 | S.Afr.  | W T P    | A S            | MA C             | July-Aug         | 55-40x38         | Aug-Oct        | 7 grms        |      |                |
| 9812-58  | coloratum      | 253253 | S.Afr.  | W T P    |                | 1 plant          | July-Aug         | 24-12x12         | Aug            | No fill       |      |                |
| 9813-58  | coloratum      | 253254 | S.Afr.  | W T P    | A E            | A D              | July-Aug         | 72-54x28         | Aug-Sept       | 5 grms        |      |                |
| 9815-58  | coloratum      | 253256 | S.Afr.  | W T P    | No notes taken |                  | July             | 60-40x24         | Aug            | 3 grms        |      |                |
| 6149-57  | makarikariense | 184776 | Rhodes. | W T P    | F E            | F D              | Tacking at nodes | Jul-Aug 60-46x38 | Aug-Sept       | 18 grms       |      |                |
| 11481-60 | miliaceum      | 268411 | Afghan  | A        | F E            | 45-4x4           | May-June*        | 45-4x4           | May-June*      | 4 grms        |      |                |
| 11600-60 | miliaceum      | 271195 | India   | W A      | MA E           | 60-40x28         | June-July        | 28-26x28         | Aug-Sept       | 110 grms      |      |                |
| 6514-57  | stapfianum     | 185548 | SW Afr  | W H P    | MA E           | 32-20x18         | May              | 60-40x24         | Aug-Sept       | 77 grms       |      |                |
| 6875-58  | stapfianum     | 190326 | S.Afr.  | W T P    | F E            | 36-30x36         | June             | 48-36x60         | Aug-Sept       | 8 grms        |      |                |
| 7275-53  | stapfianum     | 196367 | S.Afr.  | W T P    | MA S           | 48-36x60         | July             | 36-24x28         | Aug-Sept       | 5 grms        |      |                |
| 7276-58  | stapfianum     | 196378 | S.Afr.  | W T P    | MA S           | F C              | July             | 43-33x42         | Aug-Sept       | 26 grms       |      |                |
| 7575-57  | stapfianum     | 198589 | S.Afr.  | W T P    | MA E 1/        | MA C             | July             | 52-38x36         | Aug-Sept       | 75 grms       |      |                |
| 8246-56  | stapfianum     | 206371 | S.Afr.  | W T P    | MA C           | Tacking at nodes | July             | 52-38x36         | Aug-Sept       | 120 grms      |      |                |

## 1# Rhizomatous



1961 Grass Plantings - Beltsville, Md.

| BN NO.     | SPECIES | PI NO. | ORIGIN  | HABIT | STEMS     | LEAVES | POLLIN.      | BLOOM | MATURE   | SEED     | COLL.     | *Green- | x        | house  | Period   | Amt.     |         |
|------------|---------|--------|---------|-------|-----------|--------|--------------|-------|----------|----------|-----------|---------|----------|--------|----------|----------|---------|
|            |         |        |         |       |           |        |              |       |          |          |           | C-Cool  | *Stolon. | W-Warm | A-Abund. | A-Abund. | H-Hardy |
| PENNISETUM |         |        |         |       |           |        |              |       |          |          |           |         |          |        |          |          |         |
| 9069-57    | ciliare | 243198 | Rhodes. | W T P | A S 1/    | A D    | A            |       | July     | 50-42x56 | Aug-Sept  | 170     | grms     |        |          |          |         |
| 9070-57    | ciliare | 243199 | Rhodes. | W T P | MA S 1/   | MA D   | A            |       | July     | 54-43x58 | Aug-Sept  | 360     | grms     |        |          |          |         |
| 9929-58    | ciliare | T-4701 | Texas   | W T P | A S 1/    | MA C   | A            |       | July-Aug | 40-33x42 | Aug-Sept  | 110     | grms     |        |          |          |         |
| 11581-60   | ciliare | 271146 | India   | W T P | A E       | A C    | A            |       | Aug.     | 60-60x42 | Sept.     | 100     | grms     |        |          |          |         |
| 11603-60   | ciliare | 271198 | India   | W T P | A S 1/    | A D    | A            |       | July     | 50-42x56 | Aug-Sept  | 220     | grms     |        |          |          |         |
| 11604-60   | ciliare | 271199 | India   | W T P | * A S 1/  | A D    | Good acc.    |       | July     | 33-28x54 | Aug-Oct.  | 2 #     | 6 oz.    |        |          |          |         |
| 11605-60   | ciliare | 271200 | India   | W T P | -MA S 1/  | MA D   | A            |       | July     | 32-24x42 | Aug-Sept  | 530     | grms     |        |          |          |         |
| 11606-60   | ciliare | 271201 | India   | W T P | A S 1/    | A D    | A            |       | July     | 48-42x64 | Aug-Sept  | 280     | grms     |        |          |          |         |
| 11607-60   | ciliare | 271202 | India   | W T P | A E-S 1/  | A D    | fine texture |       | July     | 31-27x40 | Aug-Oct.  | 310     | grms     |        |          |          |         |
| 11608-60   | ciliare | 271203 | India   | W T P | A E-S 1/  | MA D   | A            |       | July-Aug | 46-36x52 | July-Sept | 1#      | 6 oz.    |        |          |          |         |
| 11609-60   | ciliare | 271204 | India   | W T P | A S       | A D    | A            |       | July     | 40-38x45 | July-Oct  | 360     | grms     |        |          |          |         |
| 11610-60   | ciliare | 271205 | India   | W T P | A E-S     | MA D   | Blue-green   |       | July     | 42-32x32 | July-Sept | 250     | grms     |        |          |          |         |
| 11611-60   | ciliare | 271206 | India   | W T P | A E-S 1/  | A D    | Blue-green   |       | June-Aug | 46-40x56 | July-Sept | 1#      | 3 oz.    |        |          |          |         |
| 11612-60   | ciliare | 271207 | India   | W T P | MA E-S 1/ | A D    | Green, hairy |       | July-Aug | 42-42x54 | Aug-Sept  | 335     | grms     |        |          |          |         |
| 11613-60   | ciliare | 271208 | India   | W T P | A E       | A C    | A C          |       | June     | 36-30x46 | July-Sept | 480     | grms     |        |          |          |         |
| 11614-60   | ciliare | 271209 | India   | W T P | A S       | A C    | A C          |       | July     | 36-30x48 | July-Sept | 1#      | 5 oz     |        |          |          |         |
| 11615-60   | ciliare | 271210 | India   | W T P | A E 1/    | A C    | A C          |       | June     | 42-32x45 | July-Sept | 230     | grms     |        |          |          |         |
| 11616-60   | ciliare | 271211 | India   | W T P | A S 1/    | A C    | A C          |       | June     | 38-32x48 | Aug-Sept  | 1#      | 1 oz     |        |          |          |         |
| 11617-60   | ciliare | 271212 | India   | W T P | A E       | A C    | A C          |       | June     | 44-32x34 | July-Sept | 310     | grms     |        |          |          |         |
| 11618-60   | ciliare | 271213 | India   | W T P | A S 1/    | A C    | A C          |       | June     | 36-28x46 | Aug-Sept  | 310     | grms     |        |          |          |         |
| 11619-60   | ciliare | 271214 | India   | W T P | A S 1/    | A C    | A C          |       | June     | 42-36x46 | Aug-Sept  | 420     | grms     |        |          |          |         |
| 11620-60   | ciliare | 271215 | India   | W T P | A S 1/    | A C    | A C          |       | June     | 40-33x52 | Aug-Sept  | 110     | grms     |        |          |          |         |



1961 Grass Plantings - Beltsville, Md.



1961 Grass Plantings - Beltsville, Md.

| BN NO.   | SPECIES                   | PI NO. | ORIGIN        | HABIT | STEMS | LEAVES | POLLIN.  | BLOOM | MATURE<br>SIZE | SEED<br>COLL.       |  |  |  |
|----------|---------------------------|--------|---------------|-------|-------|--------|----------|-------|----------------|---------------------|--|--|--|
|          |                           |        |               |       |       |        |          |       |                |                     |  |  |  |
| 11228-59 | <i>STIPPA diegonensis</i> | 264408 | Argent.       |       |       |        |          |       |                | All dead by 7/18/61 |  |  |  |
| 11229-59 | <i>humilis</i>            | 264409 | Argent.       |       |       |        |          |       |                | All dead by 8/28/61 |  |  |  |
| 11230-59 | <i>ibari</i>              | 264410 | Argent.       |       |       |        |          |       |                | All dead by 8/28/61 |  |  |  |
| 11231-59 | <i>neaei</i>              | 264411 | Argent.       |       |       |        |          |       |                | All dead by 8/28/61 |  |  |  |
| 11232-59 | <i>psylantha</i>          | 264412 | Argent.       |       |       |        |          |       |                | All dead by 8/28/61 |  |  |  |
| 11254-59 | <i>TRICHLORIS crinita</i> | 265569 | Argent. W T P | MA E  | MA C  | June   | 42-24x12 | Aug.  | 145 grms       |                     |  |  |  |



Previous Plantings - Beltsville, Md.

## 1/ - Rhizomatous



Previous Plantings - Beltsville, Md.

| BN NO.            | SPECIES                     | PI NO. | ORIGIN   | HABIT   | STEMS  | LEAVES | POLLIN. | BLOOM    | MATURE   | SEED SIZE   | COLL.   | SEED    |
|-------------------|-----------------------------|--------|----------|---------|--------|--------|---------|----------|----------|-------------|---------|---------|
| 6218-49           | CHRYSTOPOGON montanus       | 185144 | Iraq     | C H P   | F E    | MA B   | C       | June     | 52-11x19 | July        | 5 grms  |         |
| 10493-58          | ERAGROSTIS meglosperra      | 257724 | Austral  | W T P   | A E    | MA D   | ?       | Oct.     | 40-36x10 | Dec. - Mar* | 16 grms |         |
| 10508-58          | FESTUCA elatior             | 257739 | Czech.   | C H P   | A E    | A D    | C       | May      | 38-26x22 | June        | 12 oz.  |         |
| 10511-58          | FESTUCA spectabilis         | 257742 | Sweden   | C H P   | A E    | A B-C  | C       | May      | 52-26x32 | June        | 8 oz.   |         |
| 10389-58          | LOLIUM perenne 'Viris'      | 257270 | Sweden   | C H P   | F E    | MA B   | C       | June     | 17-6x12  | July        | 25 grms |         |
| 10541-58          | OPHTURUS exaltatus          | 257772 | Austral  | W T P   | F E    | A B    | ?       | Aug      | 44-24x18 | Sept - May  | Trace   |         |
| 9984-58           | PANICUM virgatum            | none   | New York | W H P   | A E 1/ | A C    | C       | ?        | 50-28x22 | Aug.        | O.P.    | 67 grms |
| 9985-58           | PANICUM virgatum            | none   | New York | W H P   | A E 1/ | A C    | C       | ?        | 51-28x20 | Aug.        | O.P.    | 60 grms |
| 10728-59          | PANICUM virgatum            | none   | Va.      | W H P   | MA E   | F C    | C       | ?        | 84-55x44 | Not wanted  |         |         |
| 10860-53          | PANICUM virgatum            | none   | Kans.    | W H P   | A E 1/ | F C    | C       | ?        | 52-36x22 | Sept.       | O.P.    | 85 grms |
| 10996-59          | PANICUM virgatum v. cubense | none   | N.C.     | W H P   | A E    | A D    | C       | ?        | 44-30x13 | Aug.        | O.P.    | 12 grms |
| 10997-59          | PANICUM virgatum v. cubense | none   | N.C.     | W H P   | A E    | A D    | C       | ?        | 44-28x11 | Aug         | O.P.    | 36 grms |
| PHALARIS aquatica | ex-254902                   | Iraq   | C H P    | MA E 1/ | MA B-C | C      | June    | 55-30x16 | July     | 75 grms     |         |         |
| PHALARIS aquatica | ex-254903                   | Iraq   | C H P    | MA E 1/ | MA B-C | C      | June    | 54-27x16 | July     | 35 grms     |         |         |

1/ - Rhizomatous



Previous Plantings - Beltsville, Md.

| BN NO.   | SPECIES                         | PI NO. | ORIGIN   | HABIT | STEMS                       | LEAVES   | POLLIN. | BLOOM  | MATURE   | SEED SIZE | COLL.   |  |
|----------|---------------------------------|--------|----------|-------|-----------------------------|----------|---------|--------|----------|-----------|---------|--|
| 10379-58 | PHALARIS aquatica X arundinacea | 256956 | Argent.  | C H P | MA E                        | MA B-C   | C       | June   | 46-30x12 | July      | 42 grms |  |
| 10777-58 | aquatica X arundinacea          | 261030 | Engl.    | C H P | MA E                        | A B-C    | C       | June   | 59-33x14 | July      | 15 grms |  |
| 10778-58 | aquatica X arundinacea          | 261031 | Engl.    | C H P | MA E 1/                     | MA B-C   | C       | June   | 50-27x15 | July      | 20 grms |  |
| 10390    | PHLEUM pratense "Kemp II"       | 257271 | Sweden   | C H P | MA E                        | MA B-C   | C       | June   | 32-24x12 | Aug.      | 60 grms |  |
| 10391-58 | pratense "T-44"                 | 257272 | Sweden   | C H P | MA E                        | MA B-C   | C       | June   | 33-17x12 | Aug.      | 80 grms |  |
| 10555-58 | PIETRACHNE bynoei POA           | 257786 | W. Austr | W P   | Sticky, harsh leaves.       | No value | July    | -      | -        | -         | No fill |  |
| 10719-57 | palustris SESLERIA              | -      | N. Dak.  | C H P | MA E 1/                     | F B      | ?       | July   | 18-12x9  | Aug.      | No fill |  |
| 9981-58  | sp. ZOYSIA                      | 253719 | Yugo.    | C H P | F E                         | A B      | ?       | May    | 19-11x8  | June      | Trace   |  |
| 10998-60 | matrella                        | 264343 | Formosa  | W H P | * - Fine leaved, aggressive |          |         | --5x42 | No seed  |           |         |  |



1961 Plantings - Legumes and Other, Beltsville, Md.

| BN NO.   | SPECIES                  | PI NO.  | ORIGIN   | HABIT | STEMS | LEAVES | POLLIN.        | BLOOM    | MATURE<br>SIZE     | SEED<br>COLL.      | *Stolon. |          |
|----------|--------------------------|---------|----------|-------|-------|--------|----------------|----------|--------------------|--------------------|----------|----------|
|          |                          |         |          |       |       |        |                |          |                    |                    | C-Cool   | W-Warm   |
| 9089-58  | AMPHICARPA<br>bracteata  | NY-1285 | N.Y.     | P     | F P   | MA D   | Tacks at nodes | 4x20     | Died without bloom |                    | A-Abund. | A-Abund. |
| 10442-58 | ATYLOSIA<br>marmorata    | 257673  | Austral  | ?     |       |        |                |          |                    |                    | MA-Mod.  | MA-Mod.  |
| 10443-58 | marmorata                | 257674  | Austral  | ?     |       |        |                |          |                    |                    |          |          |
| 6287-52  | BISERRULA<br>pelecinus   | 186284  | Portu.   | P     | A P   | A      | D              | S        | Mar-Apr            | 4x42               | Apr-May* |          |
| 11641    | CANTHAROSPERMUM<br>sp.   | 271526  | India    | W T A | F P   | F      | D              |          | May-Sept           | 5x12               | June-Oct | 15 gr    |
| 1033-59  | CAREX<br>sp.             | 265026  | Belg.    | C H P | F E / | F      | B              |          | 6x14               | Died without bloom |          |          |
| 8697-56  | CASSIA<br>artemisioides  | 238252  | WAustral | W H P | F E   | A D    | Shrub S        | Feb-June | 60x54              | July-Aug*          | 23 gr    |          |
| 8699-56  | sturtii                  | 238254  | Austral  | W T P | F E   | A D    | S              | Nov.     | 72x66              | Dec*               | -        | 16 gr    |
| 10181-58 | CORONILLA<br>cappadocica | 255339  | Yugo.    | C H P |       |        |                | 5x5      | Died without bloom |                    |          |          |
|          | CROTOLARIA               | 199321  | Afr.     | W T   | F E   | F D    | S              |          |                    | May-Nov            | 38 gr    |          |
| 7722-56  | astragalina              | 257694  | Afr.     | W T   | F E   | MA D   | S              | Oct.     | 96x48              | Nov.               | 62 gr    |          |
| 10463-58 | astragalina              | 257695  | WAustral | W T P | F E   | A D    | C              | Jan-Aug  | 72"high            | A shrub            |          |          |
| 10464-58 | cunninghamii             | 182795  | Guat.    | P     | MA E  | A D    | S              | Apr-July | 48x96              | May-Dec*           | 120 gr.  |          |
| 5928-48  | incana                   |         | BN Sel,  | P     | MA E  | A D    | S              | Apr-July | 108x36             | May-Dec*           | 150 gr   |          |
| 8576-56  | incana                   |         |          |       |       |        |                |          |                    |                    |          |          |

✓ - Rhizomatous



1961 Plantings - Legumes and Other, Beltsville, Md.

\*Green-  
- house



1961 Plantings - Legumes and Other, Beltsville, Md.

\*Green-house

| BN NO.   | SPECIES                   | PI NO. | ORIGIN  | HABIT  | STEMS  | LEAVES | POLLIN. | BLOOM | MATURE SIZE | SEED COLL. | SEED | COLL. |
|----------|---------------------------|--------|---------|--------|--------|--------|---------|-------|-------------|------------|------|-------|
| 11506-60 | <i>SANGUTISORBA minor</i> | 269396 | Afghan. |        |        |        |         |       |             |            |      |       |
| 9851-58  | STROPHOSTYLES helvola     | -      | Md.     | A      | MA P   | A D    |         |       |             |            |      |       |
| 9028-57  | umbellata                 | -      | Del.    | P Vine | MA P   | A D    |         |       |             |            |      |       |
| 11462-60 | TRIFOLIUM baccarinii      | 268337 | Congo   | A      | MA P   | A D    |         |       |             |            |      |       |
| 11463-60 | baccarinii                | 268338 | Congo   | A      | MA P   | MA D   |         |       |             |            |      |       |
| 9533-39  | glomerata                 | -      | Turkey  | A      | A P    | A D    |         |       |             |            |      |       |
| 11569-39 | echinatum ?               | -      | Turkey  | A      | F S    | F D    |         |       |             |            |      |       |
| 11571-59 | echinatum ?               | -      | Turkey  | A      | MA S   | MA D   |         |       |             |            |      |       |
| 10385-59 | hybridum v. pratense      | 249865 | Greece  | A      | MA P   | MA D   |         |       |             |            |      |       |
| 9530-39  | legopus                   | 120199 | Turkey  | A      | MA P   | MA D   |         |       |             |            |      |       |
| 9515-39  | lappaceum                 | -      | Turkey  | A      | MA S   | MA D   |         |       |             |            |      |       |
| 9516-39  | lappaceum                 | -      | Turkey  | A      | A P    | A D    |         |       |             |            |      |       |
| 9550-39  | lappaceum                 | -      | Turkey  | A      | MA P   | F D    |         |       |             |            |      |       |
| 9520-59  | meneghinianum             | -      | Turkey  | A      | A S    | MA D   | C       |       |             |            |      |       |
| 11556-60 | ochroleucon               | 251433 | Yugo.   | P      | F S    | F D    |         |       |             |            |      |       |
| 10208-58 | pratense                  | 255395 | Yugo    | P      | A S    | MA D   | C       |       |             |            |      |       |
| 11486-60 | pratense                  | 268429 | Afghan  | P      | MA S   | MA D   | C       |       |             |            |      |       |
| 11487-60 | pratense                  | 268430 | Afghan  | P      | MA S   | MA D   | C       |       |             |            |      |       |
| 11557-60 | pratense                  | 251187 | Yugo    | P      | A S-P  | MA D   | C       | Var.  |             |            |      |       |
| 11568-59 | purpureum                 | -      | Turkey  | A      | MA E-S | F D    |         |       |             |            |      |       |
| 9579-59  | resupinatum               | -      | Turkey  | A      | A P    | A D    | C       |       |             |            |      |       |
| 11488-60 | resupinetum               | 268431 | Afghan  | A      | A P    | A D    | C       | Giant | May         |            |      |       |



1961 Plantings - Legumes and Other, Beltsville, Md.

| BN NO.   | SPECIES                         | PI NO.   | ORIGIN   | HABIT              | STEMS  | LEAVES | POLLIN. | BLOOM | MATURE | SEED  | COLL.  | SEED | COLL. | Period | Amt. |
|----------|---------------------------------|----------|----------|--------------------|--|--------|---------|-------|--------|-------|--------|------|-------|--------|------|
| 11489-60 | TRIFOLIUM resupinatum           | 268432   | Afghan   | A                  | A P  | A D    | C       | May   | 8x72   | July* | 34 gr  |      |       |        |      |
| 11490-60 | resupinatum                     | 268433   | Afghan   | A                  | A P  | MA D   | C       | May   | 6x72   | July* | 42 gr  |      |       |        |      |
| 9435-36  | spumosum                        | 117405   | July     | A                  | MA P   | MA D   | S       | Apr   | 3x22   | June* | 25 gr  |      |       |        |      |
| 11475-60 | usambarensse                    | 268350   | B. Congo | P                  | A P  | MA D   | C       | Apr   | 2x24   | July* | 1 gr   |      |       |        |      |
| 11457-60 | velutinum                       | 268284   | Iran     | A                  | MA E   | MA D   | S       | Apr   | 9x19   | May*  | 21 gr  |      |       |        |      |
| 11355-60 | vesiculosum                     | 233816   | Americus | PMC                | - Failed to survive fall seeding at Beltsville |        |         |       |        |       |        |      |       |        |      |
| 12356-60 | vesiculosum                     | 234310   | Americus | PMC                | - Failed to survive fall seeding at Beltsville |        |         |       |        |       |        |      |       |        |      |
| 11570-60 | sp.                             | 249850   | Crete    | Died without bloom |  |        |         |       |        |       |        |      |       |        |      |
| 11491-60 | TRIGONELIA foenum-graecum       | 268434   | Afghan   | A                  | F E  | MA D   | S       | Apr   | 12x5   | June* | 23 gr  |      |       |        |      |
| 10210-58 | VICIA angustifolia v. segetalis | 255397   | Yugo.    | A                  | A S  | A D    | C       | May   | to 42" | June* | 154 gr |      |       |        |      |
| 11458-60 | ervilia                         | 268319   | Iran     | A                  | F E  | F D    | S       | Mar   | 10x5   | May*  | 15 gr  |      |       |        |      |
| 11492-60 | ervilia                         | 268476   | Afghan   | A                  | MA E   | MA D   | S       | Apr   | 10x6   | May*  | 22 gr  |      |       |        |      |
| 11493-60 | faba                            | 268477   | Afghan   | A                  | F E  | MA D   | S       | Mar   | 36x8   | May*  | 36 gr  |      |       |        |      |
| 11460-60 | hyrcanica                       | 268321   | Iran     | A                  | MA E   | A D    | S       | Apr   | 20x8   | June* | 16 gr  |      |       |        |      |
| 8944-57  | origata                         | 241082   | Colo.    | P                  | Failed to bloom or set seed after two years    |        |         |       |        |       |        |      |       |        |      |
| 9372-58  | purpurea                        | FC-32211 | -        | A                  | MA S   | A D    | C       | Apr   | to 48" | May*  | 64 gr  |      |       |        |      |
| 11459-60 | tenuifolia                      | 268320   | Iran     |                    | Failed to bloom or set seed                    |        |         |       |        |       |        |      |       |        |      |



National Plant Materials Center  
Domestic Distribution of Seed in 1961

| Genera             | Number of Genera Distributed to: |              |            |            |          |
|--------------------|----------------------------------|--------------|------------|------------|----------|
|                    | Corn-belt                        | Great Plains | North-east | South-east | West-ern |
| Aeluropus.....     |                                  |              | 2          | 3          |          |
| Agropyron.....     | 46                               | 1            |            | 4          | 79       |
| Agrostis.....      |                                  |              | 1          |            |          |
| Alopecurus.....    | 2                                |              |            | 2          | 3        |
| Amorpha.....       |                                  |              | 1          |            |          |
| Andropogon.....    | 1                                | 4            |            | 7          |          |
| Anthoxanthum.....  |                                  |              | 1          | 2          |          |
| Arrhenatherum..... |                                  |              |            |            | 1        |
| Arundinella.....   |                                  |              |            | 2          |          |
| Bauhinia.....      |                                  |              |            |            | 1        |
| Biserrula.....     |                                  |              |            |            | 1        |
| Bothriochloa.....  |                                  |              | 1          |            |          |
| Bouteloua.....     | 2                                |              |            |            |          |
| Brachiaria.....    |                                  |              |            | 6          |          |
| Brachyachne.....   |                                  |              |            | 1          |          |
| Brachypodium.....  | 2                                |              |            | 9          | 2        |
| Bromus.....        | 3                                | 31           |            | 10         | 19       |
| Cassia.....        | 2                                |              |            |            | 2        |
| Catapodium.....    |                                  |              |            | 3          | 2        |
| Cenchrus.....      |                                  | 1            |            | 2          | 1        |
| Centrosema.....    |                                  |              |            | 1          | 2        |
| Chloris.....       |                                  |              |            | 2          |          |
| Clitoria.....      |                                  |              |            | 1          |          |
| Crotalaria.....    |                                  |              |            | 2          | 1        |
| *Cutandia.....     |                                  |              |            | 1          |          |
| Cynodon.....       |                                  |              | 1          |            | 1        |
| Cynosurus.....     |                                  |              |            | 1          |          |
| Danthonia.....     |                                  |              |            | 1          | 3        |
| Desmodium.....     |                                  |              | 2          | 2          | 1        |
| Dicanthium.....    |                                  |              |            | 4          |          |
| Digitaria.....     |                                  |              | 13         |            | 4        |
| Dorycnium.....     |                                  |              | 1          |            |          |
| Elaeagnus.....     |                                  |              | 4          |            | 1        |
| Echinochloa.....   |                                  |              |            |            | 1        |
| Ehrharta.....      |                                  |              |            |            | 1        |
| Elymus.....        | 8                                | 1            |            | 2          | 1        |
| Enneapogon.....    |                                  |              |            | 10         |          |
| Eragrostis.....    | 8                                | 1            |            |            | 10       |
| Eriachne.....      |                                  |              |            | 1          | 1        |
| Eriochloa.....     |                                  |              |            | 1          |          |
| Eulalia.....       |                                  |              |            | 1          |          |
| Exomis.....        |                                  |              |            |            | 1        |
| *Cyamopsis.....    |                                  |              |            |            | 104      |



National Plant Materials Center  
Domestic Distribution of Seed in 1961

| Genera             | Number of Genera Distributed to: |              |            |            |          |
|--------------------|----------------------------------|--------------|------------|------------|----------|
|                    | Corn-belt                        | Great Plains | North-east | South-east | West-ern |
| Festuca.....       |                                  | 3            | 19         | 24         |          |
| Glycine.....       |                                  |              |            | 2          | 65       |
| Hedysarum.....     |                                  | 1            |            | 2          |          |
| Helianthus.....    |                                  |              |            | 23         |          |
| Hippocrepis.....   |                                  |              |            | 1          |          |
| Hordeum.....       |                                  |              | 1          | 4          |          |
| Hyparrhenia.....   |                                  | 2            | 1          | 1          |          |
| Indigofera.....    |                                  |              | 1          | 2          |          |
| Koeleria.....      |                                  |              |            | 1          |          |
| Lespedeza.....     |                                  | 2            | 24         | 20         |          |
| Ligustrum.....     |                                  |              | 1          |            |          |
| Lolium.....        | 1                                |              |            |            | 1        |
| Lonicera.....      |                                  |              | 2          |            |          |
| Lotononis.....     |                                  |              |            | 2          | 1        |
| Lotus.....         |                                  | 3            | 15         | 15         | 10       |
| Lupinus.....       |                                  |              |            | 1          |          |
| Medicago.....      |                                  | 1            | 6          | 7          | 5        |
| Molinia.....       |                                  |              |            | 1          |          |
| Neptunia.....      |                                  |              |            | 1          |          |
| Neurachne.....     |                                  |              |            | 1          |          |
| Onobrychis.....    |                                  |              |            |            | 81       |
| Oryzopsis.....     | 8                                |              |            |            |          |
| Panicum.....       | 47                               | 43           | 26         |            | 1        |
| Paspalum.....      |                                  |              |            | 2          | 1        |
| Pennisetum.....    |                                  |              | 1          | 5          | 13       |
| Phalaris.....      |                                  |              |            |            | 2        |
| Phaseolus.....     |                                  |              |            |            | 164      |
| Phleum.....        |                                  |              |            |            | 1        |
| Poa.....           | 4                                |              |            |            |          |
| Psoralea.....      |                                  |              |            | 14         |          |
| Puccinellia.....   |                                  |              |            | 1          |          |
| Rosa.....          |                                  |              | 3          |            |          |
| Sanguisorba.....   |                                  | 2            |            |            |          |
| Sesamum.....       |                                  |              |            |            | 15       |
| Sesbania.....      |                                  |              |            | 2          |          |
| Sesleria.....      |                                  |              | 1          |            |          |
| Setaria.....       |                                  |              |            | 1          | 27       |
| Sorghum.....       |                                  |              |            | 1          | 3        |
| Sorghastrum.....   |                                  | 5            |            |            |          |
| Spodiopogon.....   |                                  |              |            | 2          |          |
| Stylosanthes.....  |                                  |              |            | 5          |          |
| Symporicarpus..... |                                  |              | 1          |            | 1        |



National Plant Materials Center

Domestic Distribution of Seed in 1961

| :                    | Number of Genera Distributed to: |                 |                |                |              |
|----------------------|----------------------------------|-----------------|----------------|----------------|--------------|
|                      | Corn<br>:belt                    | Great<br>Plains | North-<br>east | South-<br>east | West-<br>ern |
| Tephrosia.....:      |                                  |                 |                | 6              | 6            |
| Tetragonolobus.....: | 2                                | 1               |                | 3              |              |
| Themeda.....:        |                                  |                 |                | 1              | 47           |
| Trifolium.....:      |                                  |                 |                | 39             | 38           |
| Tripsacum.....:      |                                  |                 |                | 1              |              |
| Triraphis.....:      |                                  |                 |                | 1              | 1            |
| Triticum.....:       |                                  |                 |                |                | 3            |
| Vicia.....:          |                                  |                 |                | 2              | 1            |
| Totals.....:         | 1                                | 147             | 194            | 299            | 730          |

Total Genera.....92

Total packets....1371



National Plant Materials Center  
Domestic Distribution of Vegetative Material in 1961-1962

| <u>BN No.</u> | <u>Species</u>                    | <u>Amount</u>           |
|---------------|-----------------------------------|-------------------------|
| 10738         | Ajuga reptans                     | 350                     |
| 9026          | Ammophila breviligulata           | 200                     |
| 11367         | Ammophila breviligulata           | 750                     |
| 11401         | Ammorpha fruticosa                | 1500                    |
| 11368         | Celtis caucasica - PI-260881      | 2                       |
| 11369         | Celtis sp. - PI-260882            | 2                       |
| 5531          | Crotalaria sp. PI-172185          | 5                       |
| 6943          | Crotalaria sp. PI-192957          | 5                       |
| 10996         | Cynodon dactylon "Tuffy"          | 7½ bu. + 1 sq. yd.      |
| 10880         | Dianthus deltoides                | 250                     |
| 12048         | Echinochloa polystachya PI-276898 | 7                       |
| 11538         | Elaeagnus angustifolia            | 10                      |
| 11551         | Elaeagnus angustifolia            | 10                      |
| 11373         | Elaeagnus umbellata               | 105                     |
| 11374         | Elaeagnus umbellata               | 110                     |
| 11385         | Elaeagnus umbellata               | 40                      |
| 11367         | Elaeagnus umbellata               | 40                      |
| 11426         | Elaeagnus umbellata               | 40                      |
| 12090         | Elaeagnus umbellata               | 35                      |
| 8545          | Forsythia arnoldii                | 187 + 150 whips         |
|               | Kudzu                             | 45 crowns               |
| 9088          | Ligustrum ibota "Attu"            | Whips                   |
| 680           | Liriope graminifolia              | 400                     |
| 8553          | Panicum amarum                    | 400 + 2 bu.             |
| 12049         | Panicum purpurascens              | 7                       |
| 9356          | Phalaris arundinacea - PI-227670  | 20                      |
| 9360          | Phalaris arundinacea - PI-237724  | 20                      |
| 9684          | Phalaris arundinacea - PI-234695  | 20                      |
| 9686          | Phalaris arundinacea - PI-234697  | 20                      |
| 9692          | Phalaris arundinacea - PI-235483  | 20                      |
| 9693          | Phalaris arundinacea - PI-235484  | 20                      |
| 9695          | Phalaris arundinacea - PI-235546  | 20                      |
| 9158          | Pinus nigra austriaca             | 1960                    |
| 9159          | Pinus nigra poiretana             | 1040                    |
| 12082         | Pinus sp - PI-271431              | 2                       |
| 4191          | Robinia pseudoacacia              | 175                     |
| 4192          | Robinia pseudoacacia              | 221                     |
| 4193          | Robinia pseudoacacia              | 75                      |
| 4194          | Robinia pseudoacacia              | 75                      |
| 4198          | Robinia pseudoacacia              | 234                     |
| 6661          | Robinia pseudoacacia              | 25                      |
| 8295          | Robinia pseudoacacia              | 50                      |
| 8316          | Robinia pseudoacacia              | 300 + 300 root cuttings |
| 8450          | Robinia pseudoacacia              | 97                      |
| 8452          | Robinia pseudoacacia              | 135                     |



## National Plant Materials Center

Domestic Distribution of Vegetative Material in 1961-1962

| <u>BN No.</u> | <u>Species</u>                             | <u>Amount</u> |
|---------------|--|---------------|
| 8470          | <i>Robinia pseudoacacia</i>                | 146           |
| 9229          | <i>Robinia pseudoacacia</i>                | 75            |
| 9230          | <i>Robinia pseudoacacia</i>                | 200           |
| 9282          | <i>Robinia pseudoacacia</i>                | 145           |
| 11029         | <i>Robinia pseudoacacia</i>                | 43            |
| 8950          | <i>Salix purpurea nana</i>                 | 10            |
| 8548          | <i>Salix tristis</i>                       | 300           |
| 11879         | <i>Tamarix</i> sp.                         | 25            |
| 10886         | <i>Thymus serphyllum</i>                   | 150           |
| 11370         | <i>Ulmus laevis</i> - PI-260883            | 1             |
| 11371         | <i>Ulmus laevis</i> - PI-260884            | 2             |
| 11372         | <i>Ulmus pumila v. arborea</i> - PI-260885 | 1             |
| 11366         | <i>Uniola paniculata</i>                   | 550           |
| 10985         | <i>Veronica officinalis</i>                | 100           |
| 9260          | <i>Vicia amoena</i> - PI-246783            | 25            |
| 8880          | <i>Zoysia japonica</i> - PI-231060         | 8x8"          |
| 8881          | <i>Zoysia japonica</i> - PI-235334         | 8x8"          |
| 5995          | <i>Zoysia japonica</i> - Z-52              | 8x8"          |
| 10998         | <i>Zoysia matrella</i> - PI-264343         | 8x8"          |
| 8550          | <i>Zoysia matrella</i>                     | 8x8"          |
| 4127          | <i>Zoysia matrella</i>                     | 8x8"          |
|               | <i>Zoysia</i> - "Emerald"                  | 8x8"          |
|               | <i>Zoysia</i> - Z-73                       | 8x8"          |





